

REMARKS

Claims 1, 4-13, 15-17, 19, 20, 22, 24, 25, 27, 29, 30, 33-40, 42-44 and 46-48 were presented for examination. In an Office Action dated June 29, 2007 claims 1, 4-13, 15-17, 19, 20, 22, 24, 25, 27, 29, 30, 33-40, 42-44 and 46-48 were rejected. Applicants thank the Examiner for examination of the claims pending in this application and address the Examiner's comments below. Based on the above Amendment and following Remarks, Applicants respectfully request that the Examiner reconsider all outstanding rejections and withdraw them.

Interview Summary

Applicants thank the Examiner for his time in conducting a telephone interview on October 19, 2007 with Applicants' representative Pauline Farmer-Koppenol. During the telephone interview, Applicants' representatives and the Examiner discussed claims 4, 7, and 9 and the Nakagawa, Spletzer, and Lechner references. No agreement was reached, but the Examiner agreed to consider Applicant's discussion when the amendment is received.

Response to Rejections Under 35 USC 103(a)

In the Office Action, the Examiner rejects claims 1, 5-8, 10-13, 15-17, 19, 27, 29, 30, 38, 46 and 48 under 35 USC § 103(a) in view of various combinations of Nakagawa (US 2004/0095314), Spletzer (U.S. 6,919,909), Lechner (U.S. 5,487,665), and Dugdale (U.S. 5,707,128). These rejections are now traversed.

Claims 1, 27, 29, 30, 38, 46, and 48 as amended recite display systems and methods for displaying a display image corresponding to a source image. Claim 1 is representative:

A multi-projector display system for displaying on a screen a display image corresponding to a source image including at least one window, comprising:

- a window projector, for displaying, at a display location on the screen, a first portion of the display image corresponding to a movable window from the source image;
- a workspace projector, for displaying on the screen a second portion of the display image comprising a blank area corresponding to the display location of the movable window from the source image, wherein no light is projected in the blank area by the workspace projector;
- an input device, for receiving user input changing the source image; and
- a control mechanism, coupled to the window projector and input device, for, responsive to the input device receiving a user command to drag the moveable window from a first location to a second location in the source image, controlling the window projector to affect a change in the display location on the screen of the first portion of the display image.

These aspects of the claimed invention pertain to user input changes *changing a source image*, e.g., moving a window in the source image, that result in changes to a *corresponding display image*, e.g., changing the location of the portion of the display image corresponding to the window. As a preliminary matter, Applicants submit that these aspects of the claimed invention were distinguishable in the claims pending prior to this amendment, e.g., by way of language such as “for displaying, at a display location, a first portion of the image *corresponding to a movable window*” (i.e., as distinguished from the portion *being* the moveable window). However, in the interest of furthering prosecution, Applicants have amended the claims herein to more clearly articulate these aspects.

These aspects of the claimed invention are not disclosed or suggested by the cited references considered alone or in the combination proposed by the Examiner.

Specifically, Nakagawa merely describes an interactive display whiteboard, in which “windows” *displayed on the whiteboard* may be moved such that they are displayed in a

different position *on the whiteboard*. See, e.g., Nakagawa, FIGS. 9A-9B, [0071] – [0076]. However, Nakagawa does not disclose or suggest **displaying a portion of a display image** corresponding to a **portion of a source image**. In Nakagawa, there is only one image: the one displayed on the whiteboard. *Id.* Thus, Nakagawa does not show at least “displaying ... a first portion *of the display image* corresponding to a movable window *from the source image*,” “displaying ... a second portion *of the display image* comprising a blank area corresponding to the display location of the movable window *from the source image*,” or any other portions of a **display image** corresponding to windows **from the source image** as recited in claims 1, 27, 29, 30, 38, 46, and 48.

Spletzer does not remedy these deficiencies. Spletzer merely shows two image portions displayed on a display medium. See, e.g., Spletzer, FIG. 1. Spletzer does not describe any *changes to a source image via user input*. On the contrary, Spletzer implies that distinguishing between and moving display portions on the display medium result from some aspect inherent in the source image, e.g., a “subset [of the image] deserving attention,” such as “a ball in a sporting event.” See, e.g., Spletzer, col. 2, ll. 20-29. No information whatsoever is provided as to how the changes to the displayed images might be affected. Thus, Spletzer, considered alone or in the combination proposed by the Examiner, also does not show displaying portions of a **display image** corresponding to windows **from the source image** as articulated in the various claim elements of claims 1, 27, 29, 30, 38, 46, and 48.

Lechner also does not remedy these deficiencies. Lechner merely shows a two projector system for projecting inset images on a background image. See, e.g., Lechner, FIG. 2. However, Lechner does not describe any *changes to a source image via user input*. On the contrary, the changes to the displayed images in Lechner are the result of “a pre-programmed simulation routine.” Lechner, col. 8, ll. 6-7. Thus, Lechner,

considered alone or in the combination proposed by the Examiner, also does not show displaying portions of a **display image** corresponding to windows **from the source image** as articulated in the various claim elements of claims 1, 27, 29, 30, 38, 46, and 48.

Neither does Dugdale remedy these deficiencies. Dugdale merely shows multiple projector alignment in a simulator system. *See, e.g.,* Dugdale, Abstract. Dugdale does not describe any *changes to a source image via user input*. Rather, with respect to the source of the displayed image, Dugdale shows only projection of a target image “supplied by target image data from the image *generator* 54.” *See* Dugdale, col. 3, ll. 6-8 (emphasis added). Thus, Dugdale, considered alone or in the combination proposed by the Examiner, also does not show displaying portions of a **display image** corresponding to windows **from the source image** as articulated in the various claim elements of claims 1, 27, 29, 30, 38, 46, and 48.

Applicants can find nowhere in Nakagawa, Spletzer, Lechner, or Dugdale, considered alone or in the combination proposed by the Examiner, any disclosure or suggestion of a *source image* for *receiving user input to affect changes* (movement, size, etc.) to a *display image*. Thus, the deficient disclosures of these references, considered either alone or in the combination suggested by the Examiner, thus fail to establish even a *prima facie* basis from which a proper determination of obviousness under 35 U.S.C. § 103(a) can be made. Thus, Applicants submit that claims 1, 27, 29, 30, 38, 46, and 48 are patentably distinguishable over the cited references.

Independent claims 4, 22, 25, and 47, as amended, recite limitations similar to those discussed above. Thus, these claims similarly are patentably distinguishable over the cited references for the reasons articulated above.

Claims 5-8, 10-13, 15-17, 19, 34-37, 39, 40, and 42-44 variously depend from claims 1 or 30, which were shown above to be patentably distinguishable over the cited references. All arguments advanced above with respect to independent claims 1, 27, 29, 30, 38, 46, and 48 apply equally to dependent claims 5-8, 10-13, 15-17, 19, 34-37, 39, 40, and 42-44. Applicants submit that dependent claims 5-8, 10-13, 15-17, 19, 34-37, 39, 40, and 42-44 are patentably distinguishable over the cited references by reason of their dependency, in addition to the further patentably distinguishable limitations recited therein.

Thus, claims 1, 4-8, 10-13, 15-17, 19, 22, 25, 27, 29, 30, 38, and 46-48 are patentably distinguishable over the cited art.

In the Office Action, the Examiner rejects claims 4, 9, 20, 30, 33, 34-37, 39, 40, and 42-44 under 35 USC § 103(a) in view of various combinations of Nakagawa, Spletzer, and Lechner. These rejections are now traversed.

As an initial matter, claims 4, 30, and 33 are patentably distinguishable over Nakagawa, Spletzer, Lechner, and Dugdale for the reasons articulated above.

With respect to claims 4 and 30, the combination of Nakagawa, Spletzer, and Lechner has additional deficiencies.

Claims 4 and 30 as amended respectively recite a display system and method for displaying an image including at least two windows, one of which is a focus window receiving user input, and changing focus from one window to another. Claim 4 is representative, comprising, *inter alia*: “displaying...a first portion of the display image corresponding to...an active window selected via user input to the source image” and “receiving a user command to change the active window from the first window to the second window such that the second window becomes the active window.”

These aspects of the claimed invention pertain to changing which window is the **active window**, and thus which projector is projecting a given window. Windows that are active are controlled by the window projector and windows that are not active are controlled by the workspace projector, thus, when the active window changes from a first window controlled by the window projector to a second window, the workspace projector takes over control of the first window and the window projector takes over control of the second window.

These aspects of the claimed invention are not disclosed or suggested by the cited references considered alone or in the combination proposed by the Examiner. Specifically, Nakagawa merely describes an interactive display system that uses a **single projector**. *See, e.g.,* Nakagawa, FIG. 4. Thus, no recitation is made of an active window associated with one projector, as distinguished from a window associated with another projector or of switching projectors. Thus, Nakagawa does not show at least “chang[ing] the active window from the first window to the second window” as recited in claims 4, and 30.

Spletzer does not remedy these deficiencies. Spletzer merely shows two projectors for two different parts of the image, one in low resolution and one in high resolution. *See, e.g.,* Spletzer, Abstract. Spletzer does not disclose or suggest any *change in which window of an image is active, i.e., which window is selected by the user*, and thus also does not disclose *changes to which projector displays a portion of an image*. The Examiner points to Spletzer, col. 2, ll. 26-29 for this element. However, this section merely describes the ability to change the “*content*” of the subset when *changes occur in the “image itself”* (continuing the ball at sporting event example, an example might be when the ball itself rotates, e.g., showing the proper location of the stitching on the ball), or changes “in relation to the [overall] image (as the *subset* deserving attention

moves relative to the image).” See Spletzer, col. 2, ll. 23-29. The example provided is “motion of an onscreen object (such as a ball in a sporting event).” *Id.* at 26-29. However, Spletzer does not disclose the ability to *change which window is active, such that the active window changes from one window (or any other portion) to another*, nor the correlating *change in projector for the window*. Spletzer does not suggest the notion of an active window, as no indication whatsoever is provided of how user input (*i.e.*, selection) might affect the image. In addition, Spletzer makes no disclosure of any “window,” much less changing focus from one to another. The Examiner indicated in the Office Action at p. 5 that “The Examiner understands that the onscreen object [of Spletzer] could be a window.” Applicants respectfully disagree with Examiner’s characterization of a window as such. A window, as used in the context of the claims, is more than just a “portion of the image” as described in Spletzer. Rather, a “window” is used in its traditional computer science usage; a window such as used “in a conventional graphic user interface.” See Specification, [0034]. Spletzer thus discloses no window.

Thus, Spletzer, considered alone or in the combination proposed by the Examiner, does not disclose or suggest at least “displaying... **an active window selected via user input,**” nor “**chang[ing] the active window** from the first window to the second window” per claims 4 and 30.

Lechner also does not remedy these deficiencies. Lechner merely shows a two projector system for projecting inset images on a background image in the context of a flight simulation system. See, *e.g.*, Lechner, FIG. 1. However, Lechner does not disclose the ability to *change an active window, such that which window is selected via user input changes from one window (or any other portion) to another*, nor the correlating *change in projector for the window*. On the contrary, Lechner assigns static tasks to specific projectors, *e.g.*, background images are displayed by background projector 20

and inset images are projected by inset projector 20, and images appear never to switch from one to the other. See, e.g., Lechner, FIG. 2, and accompanying text. In addition, Lechner does not suggest that any image portion *selected via user input*, and thus also does not disclose that *which window is selected via that input could be changed*. Rather, Lechner's images are part of "a pre-programmed simulation routine." Lechner, col. 8, ll. 6-7. Thus, Lechner, considered alone or in the combination proposed by the Examiner, also does not show at least "displaying... **an active window selected via user input**," nor "**chang[ing] the active window** from the first window to the second window" per claims 4 and 30.

Applicants can find nowhere in Nakagawa, Spletzer, or Lechner, considered alone or in the combination proposed by the Examiner, any disclosure or suggestion of **displaying an active window selected via user input nor changing the active window from one window to another**. Thus, the deficient disclosures of these references, considered either alone or in the combination suggested by the Examiner, thus fail to establish even a *prima facie* basis from which a proper determination of obviousness under 35 U.S.C. § 103(a) can be made. Thus, Applicants submit that claims 4 and 30 are patentably distinguishable over the cited references for this additional reason.

Claims 34-37, 39, 40, and 42-44 depend from claim 30, shown above to be patentably distinguishable over the cited references. All arguments advanced above apply equally to these dependent claims, and thus Applicants submit that dependent claims 34-37, 39, 40, and 42-44 are patentably distinguishable over the cited references by reason of their dependency, in addition to the further patentably distinguishable limitations recited therein.

Thus, claims 4, 30, 34-37, 39, 40, and 42-44 are patentably distinguishable over the cited art.

In the Office Action, the Examiner rejects claims 22, 24, 25, 47, and 49 under 35 USC § 103(a) in view of various combinations of Nakagawa, Spletzer, Lechner, Fisher (U.S. 5,326,266), and Dugdale. These rejections are now traversed.

As an initial matter, claims 22, 25, 47, and 49 are patentably distinguishable over Nakagawa, Spletzer, Lechner, and Dugdale for the reasons articulated above. Fisher does not remedy the above-stated deficiencies of Nakagawa, Spletzer, and Lechner, nor does the Examiner argue that it does.

With respect to claims 22, 25, and 47, the combination of Nakagawa, Spletzer, Lechner, Fisher, and Dugdale has additional deficiencies.

Claims 22, 25, and 47 as amended recite display systems for displaying an image including a seamless second portion of the image provided by multiple workspace projectors. Claim 22 is representative, and comprises, *inter alia*: “a plurality of workspace projectors...collectively displaying ...a blank area ...wherein no seam is visible in the blank area collectively displayed by the plurality of workspace projectors.”

These aspects of the claimed invention pertain to the use of multiple workspace projectors collectively to provide a second portion of an image with no visible seams. Because the second portion of the image is a blank area corresponding to the moveable (22, 25) or resizable (47) window, it is important that no seams are present from the use of the multiple workspace projectors that might lower the quality of the window itself.

These aspects of the claimed invention are not disclosed or suggested by the cited references considered alone or in the combination proposed by the Examiner. As an initial matter, the Examiner admits on p. 13 of the Office Action dated 6/29/07 that Nakagawa, Spletzer, and Lechner fail to teach a display system wherein a window

projector displays a portion of an image without visible seams in his rejection of claim 24. Applicants submit that this admission applies to workspace projectors as well.

Specifically, Nakagawa merely describes an interactive display system that uses a *single projector*. See, e.g., Nakagawa, FIG. 4. Thus, no recitation is made of **multiple workspace projectors** providing a second portion of an image at all, much less a seamless one. Thus, Nakagawa does not show at least “a plurality of workspace projectors...collectively displaying ...a blank area ...wherein no seam is visible in the blank area collectively displayed by the plurality of workspace projectors” as recited in claims 22, 25, and 47.

Spletzer does not remedy these deficiencies. Spletzer merely shows two image portions, *each* displayed by one of two projectors. See, e.g., Spletzer, FIG. 1. Thus, Spletzer does not describe **multiple projectors collectively providing a second portion of an image** at all, much less a seamless one. Thus, Spletzer, considered alone or in the combination proposed by the Examiner, also does not show at least “a plurality of workspace projectors...collectively displaying ...a blank area ...wherein no seam is visible in the blank area collectively displayed by the plurality of workspace projectors” as recited in claims 22, 25, and 47.

Lechner also does not remedy these deficiencies. Lechner merely shows a two projector system for projecting *independent* inset images on a background image in the context of a flight simulation system. See, e.g., Lechner, FIG. 1. However, Lechner does not describe multiple projectors **collectively providing a second portion of an image** at all, much less a seamless one. Thus, Lechner, considered alone or in the combination proposed by the Examiner, also does not show at least a plurality of workspace projectors...collectively displaying ...a blank area ...wherein no seam is visible in the

blank area collectively displayed by the plurality of workspace projectors” as recited in claims 22, 25, and 47.

Fisher does not remedy the deficiencies of Nakagawa, Spletzer, and Lechner. Fisher merely shows combining images *from background and inset projectors* using a vibrating orbital pattern to accomplish a blended transition *between the static background image and the inset image*. See, e.g., Fisher, col. 1, l. 66-col. 2, l. 9. However, Fisher does not disclose multiple projectors **collectively displaying a second portion of an image** comprising a blank area such that **no seam is visible in the blank area**. In discussing claim 24, the Examiner pointed to the above-cited section of Fisher as allegedly showing lack of visible seams. However, it is clear from this section that Fisher recites only the ability to blend the “transition” *between the inset and background images*, not combining multiple portions **within a collective image portion** (the blank) such that it has no seams. Thus, Fisher, considered alone or in the combination proposed by the Examiner, also does not show at least a plurality of workspace projectors...collectively displaying ...a blank area ...wherein no seam is visible in the blank area collectively displayed by the plurality of workspace projectors” as recited in claims 22, 25, and 47.

Finally, Dugdale also does not remedy the above deficiencies. Dugdale merely shows multiple projector alignment of out the window projectors (OTWPs) 43 projecting adjacent image portions in a simulator system. See, e.g., Dugdale, Abstract, FIG. 1. Dugdale does not disclose multiple projectors **collectively displaying a blank portion of an image** at all, much less a seamless collective display. Thus, Dugdale, considered alone or in the combination proposed by the Examiner, also does not show at least “a plurality of workspace projectors...collectively displaying ...a blank area ...wherein no

seam is visible in the blank area collectively displayed by the plurality of workspace projectors” as recited in claims 22, 25, and 47.

Applicants can find nowhere in Nakagawa, Spletzer, Lechner, Fisher, or Dugdale, considered alone or in the combination proposed by the Examiner, any disclosure or suggestion of at least “a plurality of workspace projectors...collectively displaying ...a blank area ...wherein no seam is visible in the blank area collectively displayed by the plurality of workspace projectors.” Thus, the deficient disclosures of these references, considered either alone or in the combination suggested by the Examiner, thus fail to establish even a *prima facie* basis from which a proper determination of obviousness under 35 U.S.C. § 103(a) can be made. Thus, Applicants submit that claims 22, 25, and 47 are patentably distinguishable over the cited references for this additional reason.

Claim 49 depends from claim 22, shown above to be patentably distinguishable over the cited references. All arguments advanced above apply equally to claim 49, and thus Applicants submit that dependent claim 49 is patentably distinguishable over the cited references by reason of its dependency, in addition to the further patentably distinguishable limitations recited therein.

Conclusion

In sum, Applicants respectfully submit that claims 1, 4-8, 10-12, 15-17, 19, 22, 25, 27, 29, 30, 34-40, 42-44, and 46-49, as presented herein, are patentably distinguishable over the cited references. The cited references do not teach, individually or in combination, all of the limitations of the claimed invention. Therefore, Applicants request reconsideration of the basis for the rejections to these claims and request allowance of them.

Entry of the replacement drawing sheets for Figures 1 through 9 is respectfully requested. Applicants also request that Examiner explicitly indicate his approval of the replacement drawing sheets in the next official communication.

Should the Examiner wish to discuss the above amendments and remarks, or if the Examiner believes that for any reason direct contact with Applicants' representative would help to advance the prosecution of this case to finality, the Examiner is invited to telephone the undersigned at the number given below.

Respectfully submitted,
JOHN BARRUS, KURT PIERSOL AND
STEPHEN SAVITZKY

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By: /Jennifer R. Bush/
Jennifer R. Bush, Attorney of Record
Registration No. 50,784
FENWICK & WEST LLP
801 California Street
Mountain View, CA 94041
Phone: (650) 335-7213
Fax: (650) 938-5200
Email: jbush@fenwick.com